COLORADO LAGOON RESTORATION FEASIBILITY STUDY BORE LOG

VIBRACORE NO. 1A

Job No.: 5274.02
Project: Colorado Lagoon Restoration Feasibility Study
Latitude: 33.77222
Longitude: 118.13634
Water Depth: 12.2 ft (Measured) Water Depth: _____ (Corrected) (MLLW)

Date: 30 June 2004 Vessel: *KLI Barge*
Logged By: NM Tube Length: 15 ft.
Cored By: DP Tube Diameter: 4 in.
Start Time: 10:33 Elapsed Time: _____
Mudline Elevation: (MLLW) Depth of Core Required: (bgs)

Weather: Sunny/warm
Seas: _____
Notes: _____

Depth in Feet	Length: Pushed	Length: Recovered	Samples: Interval	Samples: Number	Samples: Container*	PH	Pocket Penetrometer	Graphic Log
1–20	9.0 ft	8.7 ft	Top / Bottom					

Lithologic Description

SC- SILTY FINE SAND v. dark olive brown, low plasticity, very soft, strong organic (hydrocarbon?) odor, 25% fines, 75% fine sand, saturated, trace shells

SW- WELL GRADED SAND v. dark olive gray, loose, odorless, 100% fine grained sands, wet

CL- LOW PLASTICITY CLAY olive gray green, soft, less than 5% fine sand, wet

SP- POORLY GRADED SAND tan, loose, odorless, fine to coarse grained sands with abundant shell hash, wet

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF CORING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED ARE A SIMPLIFICATION OF ACTUAL CONDITIONS ENCOUNTERED.

KINNETIC LABORATORIES INCORPORATED

*Container Types
B = Bag BB = Bulk Bag
L = Liner BL = Brass Liner
J = Jar C = Composite

COLORADO LAGOON RESTORATION FEASIBILITY STUDY BORE LOG

VIBRACORE NO. 1B

Job No.: 5274.02
Project: Colorado Lagoon Restoration Feasibility Study
Latitude: 33.77168
Longitude: 118.13560
Water Depth: 9.8 ft (Measured) Water Depth: _____ (Corrected) (MLLW)

Date: 30 June 2004 Vessel: *KLI Barge*
Logged By: NM Tube Length: 15 ft.
Cored By: DP Tube Diameter: 4 in.
Start Time: 11:31 Elapsed Time: _____
Mudline Elevation: (MLLW) Depth of Core Required: (bgs)

Weather: Sunny/warm
Seas: _____
Notes: _____

Depth in Feet	Length: Pushed	Length: Recovered	Samples: Interval	Samples: Number	Samples: Container*	PH	Pocket Penetrometer	Graphic Log
1–20	9.0 ft	6.6 ft	Top / Bottom					

Lithologic Description

ML- CLAYEY SILT with trace v. Fine sand. Dark brown to black, low plasticity, v. Soft, slight hydrocarbon/strong sulfur odor, saturated, trace rootlets.

CL- SILTY CLAY Olive gray green, low plasticity ,soft, firming down core, <5% fines. Wet, firmer than above Sediments.

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KINNETIC LABORATORIES INCORPORATED

*Container Types
B = Bag BB = Bulk Bag
L = Liner BL = Brass Liner
J = Jar C = Composite

COLORADO LAGOON RESTORATION FEASIBILITY STUDY BORE LOG

VIBRACORE NO. 1C

Job No.: 5274.02
Project: Colorado Lagoon Restoration Feasibility Study
Latitude: 33.77172
Longitude: 118.13611
Water Depth: 2.0ft (Measured) Water Depth: _____ (Corrected) (MLLW)

Date: 30 June 2004 Vessel: *KLI Barge*
Logged By: NM Tube Length: 15 ft.
Cored By: DP Tube Diameter: 4 in.
Start Time: 12:09 Elapsed Time: _____
Mudline Elevation: (MLLW) Depth of Core Required: (bgs)

Weather: Sunny/warm
Seas: _____
Notes: _____

Depth in Feet	Length: Pushed	Length: Recovered	Samples: Interval	Samples: Number	Samples: Container*	PH	Pocket Penetrometer	Graphic Log
1–20	9.0 ft	7.0 ft	Top / Bottom					

Lithologic Description

SC- CLAYEY SAND with slight plasticity, v. dark brown, v. soft, strong organic odor. 80% fine sand, 10% fines, saturated.

SM- SILTY SAND, v. dark brown, no plasticity, loose, poorly sorted, ~10% fines, 90% v. Fine to coarse sed. Wet, abundant shell hash, lithics, and organic material (beach fill?).

CL- LOW PLASTICITY CLAY, dark olive gray. Soft, <5% very fine sand, wet.

SM- SILTY SAND, v. dark brown, no plasticity, loose, 80% fine sand, 20%fines (silt).

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF CORING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED ARE A SIMPLIFICATION OF ACTUAL CONDITIONS ENCOUNTERED.

KINNETIC LABORATORIES INCORPORATED

*Container Types
B = Bag BB = Bulk Bag
L = Liner BL = Brass Liner
J = Jar C = Composite

COLORADO LAGOON RESTORATION FEASIBILITY STUDY BORE LOG

VIBRACORE NO. 2A

Job No.: 5274.02
Project: Colorado Lagoon Restoration Feasibility Study
Latitude: 33.77073
Longitude: 118.13269
Water Depth: 11.9ft (Measured) Water Depth: _____ (Corrected) (MLLW)

Date: 01 July 2004 Vessel: *KLI Barge*
Logged By: NM Tube Length: 15 ft.
Cored By: DP Tube Diameter: 4 in.
Start Time: 8:54 Elapsed Time: _____
Mudline Elevation: (MLLW) Depth of Core Required: (bgs)

Weather: Sunny/warm
Seas: _____
Notes: _____

Depth in Feet	Length: Pushed	Length: Recovered	Samples: Interval	Samples: Number	Samples: Container*	PH	Pocket Penetrometer	Graphic Log
1–20	9.0 ft	8.5 ft	Top; Bottom					

Lithologic Description

ML- CLAYEY SILT, v. dark olive brown, low plasticity, v. soft, 5-10% v. fine sediment, 90-95% silt and clay, saturated, some shells, trace worms (live).

CL- LOW PLASTICITY CLAY, v. dark olive gray. Soft, 5% v. fine sand, 95% silt and clay, wet.

CL- SANDY CLAY, lt brown, soft, 45% v. fine sand, 55% sand and silt, wet to moist.

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF CORING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED ARE A SIMPLIFICATION OF ACTUAL CONDITIONS ENCOUNTERED.

KINNETIC LABORATORIES INCORPORATED

*Container Types
B = Bag BB = Bulk Bag
L = Liner BL = Brass Liner
J = Jar C = Composite

COLORADO LAGOON RESTORATION FEASIBILITY STUDY BORE LOG

VIBRACORE NO. 2B

Job No.: 5274.02
Project: Colorado Lagoon Restoration Feasibility Study
Latitude: 33.77116
Longitude: 118.13226
Water Depth: 11.1ft (Measured) Water Depth: _____ (Corrected) (MLLW)

Date: 01 July 2004 Vessel: *KLI Barge*
Logged By: NM Tube Length: 15 ft.
Cored By: DP Tube Diameter: 4 in.
Start Time: 09:50 Elapsed Time: _____
Mudline Elevation: (MLLW) Depth of Core Required: (bgs)

Weather: Sunny/warm
Seas: _____
Notes: _____

Depth in Feet	Length: Pushed	Length: Recovered	Samples: Interval	Samples: Number	Samples: Container*	PH	Pocket Penetrometer	Graphic Log
1–20	9.0 ft	7.0 ft	Top / Bottom					

Lithologic Description

ML- CLAYEY SILT, dark brown to black, low plasticity, v. soft, slight hydrocarbon/strong sulfur odor, saturated, trace organics

SM- SILTY SAND, tan to lt. brown, loose, med to coarse grains, coarsening down core, 85% med to coarse sand, 15% fines, wet.

SP- POORLY GRADED SAND with shell hash. Gray, loose, 95% coarse sands and shell hash 0.5-2 cm in diameter, saturated.

CL- LOW PLASTICITY CLAY dark olive gray. Soft, 5% v. fine sand, 95% clay and silt, wet.

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF CORING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED ARE A SIMPLIFICATION OF ACTUAL CONDITIONS ENCOUNTERED.

KINNETIC LABORATORIES INCORPORATED

*Container Types
B = Bag BB = Bulk Bag
L = Liner BL = Brass Liner
J = Jar C = Composite

COLORADO LAGOON RESTORATION FEASIBILITY STUDY BORE LOG

VIBRACORE NO. 2C

Job No.: 5274.02
Project: Colorado Lagoon Restoration Feasibility Study
Latitude: 33.77055
Longitude: 118.13198
Water Depth: 12.6ft (Measured) Water Depth: _____ (Corrected) (MLLW)

Date: 01 July 2004 Vessel: *KLI Barge*
Logged By: NM Tube Length: 15 ft.
Cored By: DP Tube Diameter: 4 in.
Start Time: 10:30 Elapsed Time: _____
Mudline Elevation: (MLLW) Depth of Core Required: (bgs)

Weather: Sunny/warm
Seas: _____
Notes: _____

Depth in Feet	Length: Pushed	Length: Recovered	Samples: Interval	Samples: Number	Samples: Container*	PH	Pocket Penetrometer	Graphic Log
1–20	9.0 ft	8.5 ft	Top / Bottom					

Lithologic Description

ML- CLAYEY SILT, black to v. dark olive gray, low plasticity, v. soft, strong organic odor, 5% v. fine sand, 95% silt and clay. Saturated, trace shells.

SC- SILTY FINE SAND olive green, soft. Slight organic odor, slight plasticity, 60% v. Fine sand, wet.

CL- LOW PLASTICITY CLAY dark olive green. Soft, odorless, <5% sand, wet.

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF CORING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED ARE A SIMPLIFICATION OF ACTUAL CONDITIONS ENCOUNTERED.

KINNETIC LABORATORIES INCORPORATED

*Container Types
B = Bag BB = Bulk Bag
L = Liner BL = Brass Liner
J = Jar C = Composite

COLORADO LAGOON RESTORATION FEASIBILITY STUDY BORE LOG

VIBRACORE NO. 3A

Job No.: 5274.02
Project: Colorado Lagoon Restoration Feasibility Study
Latitude: 33.77281
Longitude: 118.13248
Water Depth: 6.6ft (Measured) Water Depth: _____ (Corrected) (MLLW)

Date: 30 June 2004 Vessel: *KLI Barge*
Logged By: NM Tube Length: 15 ft.
Cored By: DP Tube Diameter: 4 in.
Start Time: 16:32 Elapsed Time: _____
Mudline Elevation: (MLLW) Depth of Core Required: (bgs)

Weather: Sunny/warm
Seas: _____
Notes: _____

Depth in Feet	Length: Pushed	Length: Recovered	Samples: Interval	Samples: Number	Samples: Container*	PH	Pocket Penetrometer	Graphic Log
1–20	9.0 ft	7.4 ft	Top / Bottom					

Lithologic Description

SC- CLAYEY SILT, black to v. dark olive gray, low plasticity, v. soft, strong organic odor, 5% v. fine sand, 95% silt and clay. Saturated, trace shells.

CL- MODERATE PLASTICITY CLAY olive green, soft. Slight organic odor, slight plasticity, 60% v. Fine sand, wet.

trace 1-2cm organic layers

CL- LOW PLASTICITY CLAY black, less than 20% medium grained sand, stiff, v. strong organic odor, moist to damp

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF CORING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED ARE A SIMPLIFICATION OF ACTUAL CONDITIONS ENCOUNTERED.

KINNETIC LABORATORIES INCORPORATED

*Container Types
B = Bag BB = Bulk Bag
L = Liner BL = Brass Liner
J = Jar C = Composite

COLORADO LAGOON RESTORATION FEASIBILITY STUDY BORE LOG

VIBRACORE NO. 3B

Job No.: 5274.02
Project: Colorado Lagoon Restoration Feasibility Study
Latitude: 33.77250
Longitude: 118.13200
Water Depth: 9 ft (Measured) Water Depth: _____ (Corrected) (MLLW)

Date: 30 June 2004 Vessel: *KLI Barge*
Logged By: NM Tube Length: 15 ft.
Cored By: DP Tube Diameter: 4 in.
Start Time: 17:00 Elapsed Time: _____
Mudline Elevation: (MLLW) Depth of Core Required: (bgs)

Weather: Sunny/warm
Seas: _____
Notes: _____

Depth in Feet	Length: Pushed	Length: Recovered	Samples: Interval	Samples: Number	Samples: Container*	PH	Pocket Penetrometer	Graphic Log	Lithologic Description
1–20	6.5 ft	5.8 ft	Top / Bottom						SC- CLAYEY SAND, dark olive gray-green, v. soft, 75% med. sand, 25% fines, saturated, trace shell hash SM- POORLY GRADED SAND with silt, fine to coarse grains, possible fill? SC/ML- SILTY FINE SAND, slight plasticity. SM- SILTY SAND tan to brown, compact, 10-15% fines, 90% fine sand, moist.

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF CORING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED ARE A SIMPLIFICATION OF ACTUAL CONDITIONS ENCOUNTERED.

KINNETIC LABORATORIES INCORPORATED

*Container Types
B = Bag BB = Bulk Bag
L = Liner BL = Brass Liner
J = Jar C = Composite

COLORADO LAGOON RESTORATION FEASIBILITY STUDY BORE LOG

VIBRACORE NO. 3C

Job No.: 5274.02
Project: Colorado Lagoon Restoration Feasibility Study
Latitude: 33.77195
Longitude: 118.13212
Water Depth: 11.2ft (Measured) Water Depth: _____ (Corrected) (MLLW)

Date: 30 June 2004 Vessel: *KLI Barge*
Logged By: NM Tube Length: 15 ft.
Cored By: DP Tube Diameter: 4 in.
Start Time: 17:48 Elapsed Time: _____
Mudline Elevation: (MLLW) Depth of Core Required: (bgs)

Weather: Sunny/warm
Seas: _____
Notes: _____

Depth in Feet	Length: Pushed	Length: Recovered	Samples: Interval	Samples: Number	Samples: Container*	PH	Pocket Penetrometer	Graphic Log
1–20	9.0 ft	8.3 ft	Top / Bottom					

Lithologic Description

SC- CLAYEY SAND, v. Dark gray brown, v. Soft and loose, slight hydrocarbon, strong organic odor. 25% silt and clay, 75% fine to medium sand, saturated. Trace broken shells and organic material.

ML/CL- SILTY CLAY, v. Dark gray brown, low plasticity, soft to stiff, 5% v. fine sand, 95% clay and silt, abundant organic material, slight organic odor, wet.

SM- POORLY GRADED SAND with silt, dark gray, loose, 90% fine to coarse sand, wet.

CL- LOW PLASTICITY CLAY dark olive brown, soft, 5% v. fine sand, 95% clay and silt, wet

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF CORING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED ARE A SIMPLIFICATION OF ACTUAL CONDITIONS ENCOUNTERED.

KINNETIC LABORATORIES INCORPORATED

*Container Types
B = Bag BB = Bulk Bag
L = Liner BL = Brass Liner
J = Jar C = Composite